

REMARKS

The claimed invention is directed to an apparatus and method for despreading and demodulating a spread spectrum signal. The claimed invention improves upon conventional spread spectrum signal processing techniques by using a multi-process demodulator to demodulate the despread signal. The multi-process demodulator uses two or more demodulation techniques that are suited for different interference constraints. In one embodiment, the spread spectrum receiver uses a first demodulation technique to generate a first symbol representation for a received symbol. Based on the quality of that first symbol representation, the receiver either continues processing the first symbol representation or generates a second symbol representation for the same received symbol using a second, different demodulation technique. Each of the independent claims 1, 12, 32, 50, 58, 86, and 99 makes clear that the claimed invention uses demodulation diversity by selecting a demodulation technique that is optimal for a given symbol received at a given time instant. *E.g., Spec., p. 7, ln. 29 – p. 8, ln. 13.*

The invention has practical utility in the field of spread spectrum communication systems, such as CMDA system. Further, the processing performed in the claimed invention results in the transformation of the signals. The received signal in a spread spectrum system is a composite of many signals. The correlation process, also known as despreading, results in the separation of a signal of interest from undesired signals. The despread signals, referred to in the claims as time offset correlations, are then further processed to obtain the modulation symbols transmitted by the transmitter. These modulation symbols represent the information being transmitted between the transmitter and the receiver. Thus, the despreading and demodulation processes produce a useful result in that these processes enable information to be conveyed between the transmitter and the receiver over a wireless carrier. Therefore, with the claimed invention produces a “useful, concrete, and tangible” result. Because all pending

claims 1-70 and 72-108 have a practical utility and produce a concrete result, the Examiner is requested to withdraw both the §101 rejections and the related §112 ¶1 rejections.

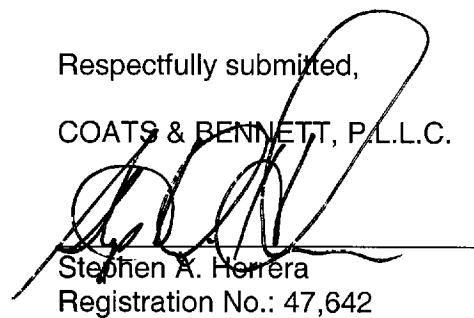
The Examiner also rejected claims 99-108 under §112, ¶1 because the preamble of independent claim 99 contained a typographical error. Particularly, claim 99 is directed to an apparatus, but recites, "...the method comprising:." In response, Applicants have amended the preamble of claim 99 without adding new matter to correct the error. As such, Applicants respectfully request that the Examiner withdraw the §112 rejections to claims 99-108.

Finally, Applicants respectfully note that the current Office Action was mailed to an incorrect correspondence address. The new correspondence address was indicated on the Revocation and Power of Attorney mailed to the Office on October 6, 2006 (copy attached). Applicants respectfully request the Office to mail all future correspondence to the address indicated on that paper.

In light of the above amendments and remarks, all pending claims stand in condition for allowance. Accordingly, Applicants respectfully request the Examiner withdraw all rejections and allow all pending claims.

Respectfully submitted,

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